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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,715	07/15/2003	Yoichi Momose	116220	7427

25944 7590 10/06/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,715

Applicant(s)

MOMOSE, YOICHI

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/14/2006 has been entered.
2. Applicant's amendment dated 07/14/2006 has been received and entered. By the amendment, claims 5-7 are now pending in the application.
3. Applicant's arguments with respect to claims 5-6 have been considered but are moot in view of the new ground(s) of rejections as follow.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al., US Patent No. 6,392,736, in view of Sekiguchi, US Patent No. 6,529,255, Inoue et al., US 2001/0017675 A1 and Kweon et al., US Patent No. 6,610,364.

Regarding the above claims, Furukawa et al. disclose a method of manufacturing liquid crystal display element comprising the step of :

- . forming a closed framed shaped seal material (26) over a lower substrate (21a);
- . disposing spacers (25) with a dispersed density of 100/300/mm² (col. 13, ln 25-27);

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- . dropping a liquid crystal (28);
- . gluing an upper substrate (21b) and the lower substrate (21a) together.

Furukawa et al. do not disclose the spacers being cover by a sticking layer and having a particle size in range of $0.96d$ to d (d = cell thickness = 2.83-3.26 microns). Inoue et al. do disclose a spacer (3a) being cover by a polymer resin (3b)(see fig. 3). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ the Furukawa et al spacer having a sticking layer (e.g., polymer) as shown by Inoue et al. in order to obtain an excellent uniform displaying property (see [0077]). In addition, Furukawa do disclose a spacer having a particle size of 4 microns which is closed enough to the claimed range of 2.83-3.26 microns. It would have been an obvious to one skilled in the art, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

Furukawa et al. do not disclose the step of forming a light-blocking layer. Sekiguchi do disclose a light-blocking layer (e.g., black matrix 7) can be formed over the upper substrate (see figure 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ a black matrix layer over an upper substrate as shown by Sekiguchi for the purposes of shielding leakage light, so as improving display characteristics (e.g., display contrast).

Furukawa et al. do not disclose both substrates made of rigid class and the step of pressing the substrates together. Kweon et al. do disclose a pair of rigid glass substrates (103, 105) can be formed in an LCD panel (101) and such two substrates would be gluing together under pressure (see figure 4). Therefore, it would have been obvious to one skilled in the art at

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the time of the invention was made to employ the Furukawa et al. device having both rigid glass substrate since it is well known in the art to use a glass substrate for an LCD device as well as applying a pressure during the step of gluing two substrates to together in order to secure such substrates together with spacers therebetween.

Conclusion

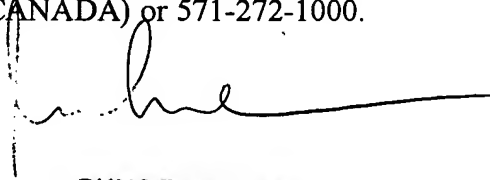
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN

10/02/05



DUNG T. NGUYEN
PRIMARY EXAMINER